

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A thermal printer for recording an image on thermosensitive recording material fed in a first direction, said recording material having first and second lateral edges extending in said first direction, said thermal printer comprising:

a thermal head for applying heat to said recording material to record said image by one line, said thermal head having a heating element array of plural heating elements arranged in a second direction crosswise to said first direction, said heating element array having at least one end disposed outside said first lateral edge;

an edge detecting sensor for detecting said first lateral edge;

heating element determination means, responsive to an output from said edge detecting sensor, for determining N edge region heating element included in said heating elements, opposed to said recording material, and disposed close to said first lateral edge, where N is an integer;

a controller for controlling driving of said edge region heating element, so as to suppress color development of said edge region heating element in at least one predetermined line on said recording material.

2. (original): A thermal printer as defined in claim 1, wherein said edge detecting sensor comprises a line sensor having plural pixels arranged at a pitch of arrangement of said heating elements.

3. (original): A thermal printer as defined in claim 2, wherein said heating element array includes outer heating elements disposed outside said first lateral edge, and said controller suppresses driving of said outer heating elements.

4. (original): A thermal printer as defined in claim 3, further comprising a recording material guide mechanism for guiding said second lateral edge.

5. (original): A thermal printer as defined in claim 3, wherein N is in a range of 3-9.

6. (original): A thermal printer as defined in claim 3, wherein said at least one predetermined line comprises plural lines with odd numbers or even numbers as counted serially.

7. (original): A thermal printer as defined in claim 3, wherein said at least one predetermined line comprises M2 adjacent line next to M1 adjacent lines, where M1 is an integer of at least two, and M2 is an integer of at least one.

8. (original): A thermal printer as defined in claim 7, wherein M1 and M2 are determined according to average density in a region in said image associated with said edge region heating element.

9. (original): A thermal printer as defined in claim 7, wherein M1 and M2 are determined according to average density in a portion in said image included in a region associated with said edge region heating element.

10. (original): A thermal printing method of recording an image on thermosensitive recording material fed in a first direction, said recording material having first and second lateral edges extending in said first direction, wherein a thermal head applies heat to said recording material to record said image by one line, said thermal head having a heating element array of plural heating elements arranged in a second direction crosswise to said first direction, said heating element array having at least one end disposed outside said first lateral edge, said thermal printing method comprising steps of:

detecting said first lateral edge;

in response to detecting said first lateral edge, determining N edge region heating element included in said heating elements, opposed to said recording material, and disposed close to said first lateral edge, where N is an integer;

controlling driving of said edge region heating element, so as to suppress color development of said edge region heating element in at least one predetermined line on said recording material.

11. (original): A thermal printing method as defined in claim 10, wherein N is in a range of 3-9.

12. (original): A thermal printing method as defined in claim 10, wherein said at least one predetermined line comprises plural lines with odd numbers or even numbers as counted serially.

13. (original): A thermal printing method as defined in claim 10, wherein said at least one predetermined line comprises M2 adjacent line next to M1 adjacent lines, where M1 is an integer of at least two, and M2 is an integer of at least one.

14. (original): A thermal printing method as defined in claim 13, wherein M1 and M2 are determined according to average density in a region in said image associated with said edge region heating element.

15. (original): A thermal printing method as defined in claim 13, wherein M1 and M2 are determined according to average density in a portion in said image included in a region associated with said edge region heating element.

Claims 16-26 (cancelled).

27. (new) A thermal printer for recording an image on thermosensitive recording material fed in a first direction, said recording material having first and second lateral edges extending in said first direction, said thermal printer comprising:

a thermal head for applying heat to said recording material to record said image by one line, said thermal head having a heating element array of plural heating elements arranged in a second direction crosswise to said first direction, said heating element array having at least one end disposed outside said first lateral edge;

an edge detecting sensor for detecting said first lateral edge;

a heating element determining circuit for determining N edge region heating element included in said heating elements, opposed to said recording material, and disposed close to said first lateral edge, where N is an integer;

a controlling circuit for controlling said N edge region heating element, so as to suppress color development of said N edge region heating element in at least one predetermined line on said recording material.

28. (new): A thermal printer as defined in claim 27, wherein said heating element array includes outer heating elements disposed outside said first lateral edge, and said controller suppresses driving of said outer heating elements.

29. (new): A thermal printer as defined in claim 27, wherein said at least one predetermined line comprises plural lines with odd numbers or even numbers as counted serially.

30. (new): A thermal printer as defined in claim 27, wherein said at least one predetermined line comprises M2 adjacent line next to M1 adjacent lines, where M1 is an integer of at least two, and M2 is an integer of at least one.

31. (new): A thermal printer as defined in claim 27, wherein M1 and M2 are determined according to average density in a region in said image associated with said edge region heating element.

32. (new): A thermal printer as defined in claim 1, wherein to suppress color development is to turn off said edge heating element.

33. (new): A thermal printer as defined in claim 27, wherein to suppress color development is to turn off said edge heating element.